

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 5, 10-21, 23, 25, and 28-42 are now pending in this Application. Claim 5 and claim 28 have been amended as discussed herein below. Claims 29-42 are new. All claims stand rejected under 35 USC 112, 35 USC 102 and/or 35 USC 103.

35 U.S.C. § 112 Rejection

Claims 5 and 28 (and all claims dependent thereon) are rejected under 35 USC 112, 1st paragraph, as failing to comply with the written description requirement.

Regarding claim 5: Applicants respectfully submit that the application as filed actually supports the previously filed amendments and generally at the locations indicated. However, as will be explained below, claim 5 has been otherwise changed, and some of the amendments to claim 5 have been undone and some moved in one manner or another into new dependent claims.

Amended claim 5 now recites the limitation that two different stimuli are generated. Support is found, for example, at page 43, line 34, through page 44, line 26. Multiple and alternative therapies and various delivery parameters for achieving such effects are described all through the application as well as, for example, at the paragraph bridging pages 10 and 11.

Thus, the 35 USC 112 rejections of claim 5 are overcome.

Regarding claim 28 (prior to amendment for consistency with claim 5), Applicants respectfully disagree that the application does not describe “desired activation profile define a synchronization of the contractions of the left and right left ventricles.” Rather, referring specifically to page 35, lines 10-15: the left branch conducts activation signals to the left ventricle and the right branch conducts activation signals to the right ventricle. Thus, controlling the conduction velocities in these branch bundles (e.g., to change the activation profile of the heart), should result in a change in the relative contraction times of the two

ventricles, as the relative time of arrival of an activation signal to each ventricle will be changed. This can result in the outcome described at lines 10-12 “controlled so the heart contracts in a sequence deemed to be more optimal than a natural sequence.”

Applicants respectfully submit that an interview may be useful for settling the issue of support for various limitations in amended and/or new claims.

35 U.S.C. § 102 Rejections

Before relating to the specific rejections, Applicants note that the Examiner seems to be broadly interpreting the term “biomechanical effect”, in an overly broad manner. While Applicants do not agree that the Examiner has shown in the art the limitation of providing separate non-excitatory signals (stimuli) which provide different effects, Applicants are changing the claim language to focus on the applied signals themselves, as the cause of difference in effect. It is also hoped that this wording of the claims will overcome the Examiner’s objection to “mere intended use” (which applicant also does not agree with). The amendments include removal of limitations relating to the logic, which were previously added. Claim 5 has also been amended by broadening thereof to remove limitations which the Examiner indicated as not having much effect and also to clarify the claim by relating specifically to there being two signals.

Claims 5, 10-21, 23, and 25 stand rejected under 35 USC 102(b) as being anticipated by Zipes. Applicants respectfully disagree and submit the Examiner did not provide a prima facie case of anticipation.

Applicants fail to find in Zipes any teaching of applying two signals which provide two different effects. Rather, Zipes appears to describe the application of only a single signal. Nevertheless, claim 5 has been amended to make explicit that the signals being applied are different in that they are applied using different delivery parameters. Even if Zipes were considered to teach applying multiple signals to multiple parts of the heart and even if Zipes were considered to teach different effects at different parts of the heart (and Applicants disagree with such interpretations), Zipes clearly does not teach more than one set of signal delivery parameters, especially not that the sets provide different effects in the tissue to which they are applied.

The rejection of dependent claims is also argued.

Regarding claim 14 and 25: Applicants respectfully do not understand the rejection. Claim 14 relates to a logic of repetition of signal application. The cited art is purely reactive and has no such logic. Claim 25 applies a signal in response to lack of abnormal activation. The Examiner did not show a specific citation for this feature in Zipes.

Regarding claims 15, 19, and 20: Again, the rejection is not clear. If the claims relate to a non-excitatory signal, how can the Examiner reject it based on an excitatory effect? In any case, the art does not show both decrease and increase in contractility. It is noted that with the clarification to claim 5, the Examiner does not have any citation showing that the tissue being stimulated is affected as described in the claims.

Regarding claims 16, 17, and 21: Zipes is specifically and only directed at arrhythmic tissue. Thus, there would be no configuration or design or even use of the apparatus of Zipes for non-arrhythmic tissue. Therefore, this rejection is unclear.

Regarding claim 18: While arrhythmias may reduce cardiac output, they are treated firstly because they are dangerous and not in response to a desired increase in cardiac output. Furthermore, according to claim 18, the signal is applied NOT in response to onset of arrhythmia; which is the opposite of the teaching of Zipes.

Claim 28 teaches synchronizing the contractions of the two ventricles. This is not shown in the art which is unrelated to inter-ventricular effects, nor is claim 28 actually rejected by the Examiner.

Claims 5, 10, 11, 13-21, 23, and 25 are rejected under 35 U.S.C. §102(b) as being anticipated by Prystowsky, U.S. Patent No. 4,554,922. Applicants respectfully disagree that the Examiner had a prima facie case of anticipation before the amendments or that one exists after the amendments.

In particular, with regard to claim 5. Prystowsky only teaches one type of signal to be applied to the heart. This signal has only a single effect. Thus, there is no teaching of applying two different signals and definitely not of achieving two different effects. Applicants also note that the application of the signal of Prystowsky (and of Zipes) is generally designed to have no positive effect, but rather act to prevent in any change from a normal activation of the heart.

Also the dependent claims are not anticipated by Prystowsky, with the arguments being substantially the same as written above for Zipes.

35 U.S.C. § 103 Rejections

The Examiner rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over *Prystowsky* in view of *Zipes*.

As described above, Applicants assert that amended claim 5 is an allowable main claim. Thus, dependent claim 12 is consequently allowable as being dependent on an allowable main claim.

Putting aside the question of whether or not a person of ordinary skill in the art would combine *Zipes* and *Prystowsky* (and to which applicant objected in the past), Applicants note that even if the signal of *Zipes* were applied to two ventricles, as suggested by the Examiner, this would still not result in the limitations of claim 12, namely, that two controls are simultaneously applied, each having a different effect. *Zipes* only teaches one type of control which is only taught as having one effect. It is also noted that the claim explicitly states each control affects a ventricle and not that one control indirectly affects both ventricles.

New claims

New claim 29, as described below corresponds, generally to previous claims 5 and 28.

New claims 30-42 relate to various features of the claimed invention.

New claim 41 is a new independent claim, which, it is believed, should be examined with the application, due to its relating to the application of two stimuli, with different effects, as apparently stipulated in the rejection of June 1, 2009. New claim 42 is dependent thereon.

Finality

As claim 28 has not been rejected over the art and its 112 rejection is arguably overcome herewith, it is respectfully suggested that claim 28 should have been allowed. New claim 29, which corresponds to previous claim 28 (with a typographical error corrected) and previous claim 5 (with the objected-to subject matter removed other than as argued above with respect to page 35, lines 1-20), should therefore be allowable and indicated as such.

Dependent claims not separately argued are patentable at least for reason of being dependent on an allowable independent claim. Applicants reserve the right to reintroduce canceled and amended claims and claim language in this or related application. It is believed that all the points raised by the examiner have been responded to and a notice of allowance is respectfully awaited.

Respectfully submitted,
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Enclosure:

- Request for Continued Examination (RCE)